

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 10/578, 410
Source: IFWP
Date Processed by STIC: 05/18/2006

ENTERED

CRF Errors Edited by the STIC Systems Branch

Serial Number: 10/578, 410

CRF Edit Date: 05/18/2006
Edited by: DA

___ **Realigned nucleic acid/amino acid numbers/text in cases where the sequence text "wrapped" to the next line**

___ **Corrected the SEQ ID NO. Sequence numbers edited were:**

___ **Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:**

/ Deleted: invalid beginning/end-of-file text ; page numbers /

___ **Inserted mandatory headings/numeric identifiers, specifically:**

___ **Moved responses to same line as heading/numeric identifier, specifically:**

___ **Other:**



IFWO

RAW SEQUENCE LISTING

DATE: 05/18/2006

PATENT APPLICATION: US/10/578,410

TIME: 15:14:50

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\05182006\J578410.raw

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3 <110> APPLICANT: IMMUNEX CORPORATION
4     Carter, Paul J.
5     Zhou, Hongxing
7 <120> TITLE OF INVENTION: ANTIBODIES THAT BIND INTERLEUKIN-4 RECEPTOR
9 <130> FILE REFERENCE: 3492-WO
C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/578,410
C--> 12 <141> CURRENT FILING DATE: 2006-05-05
14 <150> PRIOR APPLICATION NUMBER: 60/518,166
15 <151> PRIOR FILING DATE: 2003-11-07
17 <160> NUMBER OF SEQ ID NOS: 77
19 <170> SOFTWARE: PatentIn version 3.2
21 <210> SEQ ID NO: 1
22 <211> LENGTH: 2475
23 <212> TYPE: DNA
24 <213> ORGANISM: Homo sapien
27 <220> FEATURE:
28 <221> NAME/KEY: CDS
29 <222> LOCATION: (1)..(2475)
31 <400> SEQUENCE: 1
32 atg ggg tgg ctt tgc tct ggg ctc ctg ttc cct gtg agc tgc ctg gtc      48
33 Met Gly Trp Leu Cys Ser Gly Leu Leu Phe Pro Val Ser Cys Leu Val
34 1          5          10          15
36 ctg ctg cag gtg gca agc tct ggg aac atg aag gtc ttg cag gag ccc      96
37 Leu Leu Gln Val Ala Ser Ser Gly Asn Met Lys Val Leu Gln Glu Pro
38          20          25          30
40 acc tgc gtc tcc gac tac atg agc atc tct act tgc gag tgg aag atg      144
41 Thr Cys Val Ser Asp Tyr Met Ser Ile Ser Thr Cys Glu Trp Lys Met
42          35          40          45
44 aat ggt ccc acc aat tgc agc acc gag ctc cgc ctg ttg tac cag ctg      192
45 Asn Gly Pro Thr Asn Cys Ser Thr Glu Leu Arg Leu Leu Tyr Gln Leu
46          50          55          60
48 gtt ttt ctg ctc tcc gaa gcc cac acg tgt atc cct gag aac aac gga      240
49 Val Phe Leu Leu Ser Glu Ala His Thr Cys Ile Pro Glu Asn Asn Gly
50 65          70          75          80
52 ggc gcg ggg tgc gtg tgc cac ctg ctc atg gat gac gtg gtc agt gcg      288
53 Gly Ala Gly Cys Val Cys His Leu Leu Met Asp Asp Val Val Ser Ala
54          85          90          95
56 gat aac tat aca ctg gac ctg tgg gct ggg cag cag ctg ctg tgg aag      336
57 Asp Asn Tyr Thr Leu Asp Leu Trp Ala Gly Gln Gln Leu Leu Trp Lys
58          100         105         110
62 ggc tcc ttc aag ccc agc gag cat gtg aaa ccc agg gcc cca gga aac      384
63 Gly Ser Phe Lys Pro Ser Glu His Val Lys Pro Arg Ala Pro Gly Asn
64          115         120         125

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66 ctg aca gtt cac acc aat gtc tcc gac act ctg ctg ctg acc tgg agc      432
67 Leu Thr Val His Thr Asn Val Ser Asp Thr Leu Leu Leu Thr Trp Ser
68      130                      135                      140
70 aac ccg tat ccc cct gac aat tac ctg tat aat cat ctc acc tat gca      480
71 Asn Pro Tyr Pro Pro Asp Asn Tyr Leu Tyr Asn His Leu Thr Tyr Ala
72 145                      150                      155                      160
74 gtc aac att tgg agt gaa aac gac ccg gca gat ttc aga atc tat aac      528
75 Val Asn Ile Trp Ser Glu Asn Asp Pro Ala Asp Phe Arg Ile Tyr Asn
76      165                      170                      175
78 gtg acc tac cta gaa ccc tcc ctc cgc atc gca gcc agc acc ctg aag      576
79 Val Thr Tyr Leu Glu Pro Ser Leu Arg Ile Ala Ala Ser Thr Leu Lys
80      180                      185                      190
82 tct ggg att tcc tac agg gca cgg gtg agg gcc tgg gct cag tgc tat      624
83 Ser Gly Ile Ser Tyr Arg Ala Arg Val Arg Ala Trp Ala Gln Cys Tyr
84      195                      200                      205
86 aac acc acc tgg agt gag tgg agc ccc agc acc aag tgg cac aac tcc      672
87 Asn Thr Thr Trp Ser Glu Trp Ser Pro Ser Thr Lys Trp His Asn Ser
88      210                      215                      220
90 tac agg gag ccc ttc gag cag cac ctc ctg ctg ggc gtc agc gtt tcc      720
91 Tyr Arg Glu Pro Phe Glu Gln His Leu Leu Leu Gly Val Ser Val Ser
92 225                      230                      235                      240
94 tgc att gtc atc ctg gcc gtc tgc ctg ttg tgc tat gtc agc atc acc      768
95 Cys Ile Val Ile Leu Ala Val Cys Leu Leu Cys Tyr Val Ser Ile Thr
96      245                      250                      255
98 aag att aag aaa gaa tgg tgg gat cag att ccc aac cca gcc cgc agc      816
99 Lys Ile Lys Lys Glu Trp Trp Asp Gln Ile Pro Asn Pro Ala Arg Ser
100      260                      265                      270
102 cgc ctc gtg gct ata ata atc cag gat gct cag ggg tca cag tgg gag      864
103 Arg Leu Val Ala Ile Ile Ile Gln Asp Ala Gln Gly Ser Gln Trp Glu
104      275                      280                      285
106 aag cgg tcc cga ggc cag gaa cca gcc aag tgc cca cac tgg aag aat      912
107 Lys Arg Ser Arg Gly Gln Glu Pro Ala Lys Cys Pro His Trp Lys Asn
108      290                      295                      300
110 tgt ctt acc aag ctc ttg ccc tgt ttt ctg gag cac aac atg aaa agg      960
111 Cys Leu Thr Lys Leu Leu Pro Cys Phe Leu Glu His Asn Met Lys Arg
112 305                      310                      315                      320
114 gat gaa gat cct cac aag gct gcc aaa gag atg cct ttc cag ggc tct      1008
115 Asp Glu Asp Pro His Lys Ala Ala Lys Glu Met Pro Phe Gln Gly Ser
116      325                      330                      335
118 gga aaa tca gca tgg tgc cca gtg gag atc agc aag aca gtc ctc tgg      1056
119 Gly Lys Ser Ala Trp Cys Pro Val Glu Ile Ser Lys Thr Val Leu Trp
120      340                      345                      350
123 cca gag agc atc agc gtg gtg cga tgt gtg gag ttg ttt gag gcc ccg      1104
124 Pro Glu Ser Ile Ser Val Val Arg Cys Val Glu Leu Phe Glu Ala Pro
125      355                      360                      365
127 gtg gag tgt gag gag gag gag gag gta gag gaa gaa aaa ggg agc ttc      1152
128 Val Glu Cys Glu Glu Glu Glu Val Glu Glu Lys Gly Ser Phe
129      370                      375                      380
131 tgt gca tcg cct gag agc agc agg gat gac ttc cag gag gga agg gag      1200

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132	Cys	Ala	Ser	Pro	Glu	Ser	Ser	Arg	Asp	Asp	Phe	Gln	Glu	Gly	Arg	Glu	
133	385					390					395					400	
135	ggc	att	gtg	gcc	cgg	cta	aca	gag	agc	ctg	ttc	ctg	gac	ctg	ctc	gga	1248
136	Gly	Ile	Val	Ala	Arg	Leu	Thr	Glu	Ser	Leu	Phe	Leu	Asp	Leu	Leu	Gly	
137				405						410					415		
139	gag	gag	aat	ggg	ggc	ttt	tgc	cag	cag	gac	atg	ggg	gag	tca	tgc	ctt	1296
140	Glu	Glu	Asn	Gly	Gly	Phe	Cys	Gln	Gln	Asp	Met	Gly	Glu	Ser	Cys	Leu	
141				420					425						430		
143	ctt	cca	cct	tgc	gga	agt	acg	agt	gct	cac	atg	ccc	tgg	gat	gag	ttc	1344
144	Leu	Pro	Pro	Ser	Gly	Ser	Thr	Ser	Ala	His	Met	Pro	Trp	Asp	Glu	Phe	
145				435					440						445		
147	cca	agt	gca	ggg	ccc	aag	gag	gca	cct	ccc	tgg	ggc	aag	gag	cag	cct	1392
148	Pro	Ser	Ala	Gly	Pro	Lys	Glu	Ala	Pro	Pro	Trp	Gly	Lys	Glu	Gln	Pro	
149		450					455					460					
151	ctc	cac	ctg	gag	cca	agt	cct	cct	gcc	agc	ccg	acc	cag	agt	cca	gac	1440
152	Leu	His	Leu	Glu	Pro	Ser	Pro	Pro	Ala	Ser	Pro	Thr	Gln	Ser	Pro	Asp	
153	465					470					475					480	
155	aac	ctg	act	tgc	aca	gag	acg	ccc	ctc	gtc	atc	gca	ggc	aac	cct	gct	1488
156	Asn	Leu	Thr	Cys	Thr	Glu	Thr	Pro	Leu	Val	Ile	Ala	Gly	Asn	Pro	Ala	
157				485						490					495		
159	tac	cgc	agc	ttc	agc	aac	tcc	ctg	agc	cag	tca	ccg	tgt	ccc	aga	gag	1536
160	Tyr	Arg	Ser	Phe	Ser	Asn	Ser	Leu	Ser	Gln	Ser	Pro	Cys	Pro	Arg	Glu	
161				500					505						510		
163	ctg	ggt	cca	gac	cca	ctg	ctg	gcc	aga	cac	ctg	gag	gaa	gta	gaa	ccc	1584
164	Leu	Gly	Pro	Asp	Pro	Leu	Leu	Ala	Arg	His	Leu	Glu	Glu	Val	Glu	Pro	
165				515					520						525		
167	gag	atg	ccc	tgt	gtc	ccc	cag	ctc	tct	gag	cca	acc	act	gtg	ccc	caa	1632
168	Glu	Met	Pro	Cys	Val	Pro	Gln	Leu	Ser	Glu	Pro	Thr	Thr	Val	Pro	Gln	
169		530					535					540					
171	cct	gag	cca	gaa	acc	tgg	gag	cag	atc	ctc	cgc	cga	aat	gtc	ctc	cag	1680
172	Pro	Glu	Pro	Glu	Thr	Trp	Glu	Gln	Ile	Leu	Arg	Arg	Asn	Val	Leu	Gln	
173	545					550					555					560	
175	cat	ggg	gca	gct	gca	gcc	ccc	gtc	tgc	gcc	ccc	acc	agt	ggc	tat	cag	1728
176	His	Gly	Ala	Ala	Ala	Ala	Pro	Val	Ser	Ala	Pro	Thr	Ser	Gly	Tyr	Gln	
177				565						570					575		
179	gag	ttt	gta	cat	gcg	gtg	gag	cag	ggt	ggc	acc	cag	gcc	agt	gcg	gtg	1776
180	Glu	Phe	Val	His	Ala	Val	Glu	Gln	Gly	Gly	Thr	Gln	Ala	Ser	Ala	Val	
181				580					585						590		
184	gtg	ggc	ttg	ggt	ccc	cca	gga	gag	gct	ggt	tac	aag	gcc	ttc	tca	agc	1824
185	Val	Gly	Leu	Gly	Pro	Pro	Gly	Glu	Ala	Gly	Tyr	Lys	Ala	Phe	Ser	Ser	
186				595					600						605		
188	ctg	ctt	gcc	agc	agt	gct	gtg	tcc	cca	gag	aaa	tgt	ggg	ttt	ggg	gct	1872
189	Leu	Leu	Ala	Ser	Ser	Ala	Val	Ser	Pro	Glu	Lys	Cys	Gly	Phe	Gly	Ala	
190		610					615					620					
192	agc	agt	ggg	gaa	gag	ggg	tat	aag	cct	ttc	caa	gac	ctc	att	cct	ggc	1920
193	Ser	Ser	Gly	Glu	Glu	Gly	Tyr	Lys	Pro	Phe	Gln	Asp	Leu	Ile	Pro	Gly	
194	625					630					635					640	
196	tgc	cct	ggg	gac	cct	gcc	cca	gtc	cct	gtc	ccc	ttg	ttc	acc	ttt	gga	1968
197	Cys	Pro	Gly	Asp	Pro	Ala	Pro	Val	Pro	Val	Pro	Leu	Phe	Thr	Phe	Gly	

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Input Set : A:\pto.da.txt

Output Set: N:\CRF4\05182006\J578410.raw

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198          645          650          655
200 ctg gac agg gag cca cct cgc agt ccg cag agc tca cat ctc cca agc      2016
201 Leu Asp Arg Glu Pro Pro Arg Ser Pro Gln Ser Ser His Leu Pro Ser
202          660          665          670
204 agc tcc cca gag cac ctg ggt ctg gag ccg ggg gaa aag gta gag gac      2064
205 Ser Ser Pro Glu His Leu Gly Leu Glu Pro Gly Glu Lys Val Glu Asp
206          675          680          685
208 atg cca aag ccc cca ctt ccc cag gag cag gcc aca gac ccc ctt gtg      2112
209 Met Pro Lys Pro Pro Leu Pro Gln Glu Gln Ala Thr Asp Pro Leu Val
210          690          695          700
212 gac agc ctg ggc agt ggc att gtc tac tca gcc ctt acc tgc cac ctg      2160
213 Asp Ser Leu Gly Ser Gly Ile Val Tyr Ser Ala Leu Thr Cys His Leu
214 705          710          715          720
216 tgc ggc cac ctg aaa cag tgt cat ggc cag gag gat ggt ggc cag acc      2208
217 Cys Gly His Leu Lys Gln Cys His Gly Gln Glu Asp Gly Gly Gln Thr
218          725          730          735
220 cct gtc atg gcc agt cct tgc tgt ggc tgc tgc tgt gga gac agg tcc      2256
221 Pro Val Met Ala Ser Pro Cys Cys Gly Cys Cys Cys Gly Asp Arg Ser
222          740          745          750
224 tcg ccc cct aca acc ccc ctg agg gcc cca gac ccc tct cca ggt ggg      2304
225 Ser Pro Pro Thr Thr Pro Leu Arg Ala Pro Asp Pro Ser Pro Gly Gly
226          755          760          765
228 gtt cca ctg gag gcc agt ctg tgt ccg gcc tcc ctg gca ccc tcg ggc      2352
229 Val Pro Leu Glu Ala Ser Leu Cys Pro Ala Ser Leu Ala Pro Ser Gly
230          770          775          780
232 atc tca gag aag agt aaa tcc tca tca tcc ttc cat cct gcc cct ggc      2400
233 Ile Ser Glu Lys Ser Lys Ser Ser Ser Ser Phe His Pro Ala Pro Gly
234 785          790          795          800
236 aat gct cag agc tca agc cag acc ccc aaa atc gtg aac ttt gtc tcc      2448
237 Asn Ala Gln Ser Ser Ser Gln Thr Pro Lys Ile Val Asn Phe Val Ser
238          805          810          815
240 gtg gga ccc aca tac atg agg gtc tct      2475
241 Val Gly Pro Thr Tyr Met Arg Val Ser
242          820          825
245 <210> SEQ ID NO: 2
246 <211> LENGTH: 825
247 <212> TYPE: PRT
248 <213> ORGANISM: Homo sapien
250 <400> SEQUENCE: 2
252 Met Gly Trp Leu Cys Ser Gly Leu Leu Phe Pro Val Ser Cys Leu Val
253 1          5          10          15
256 Leu Leu Gln Val Ala Ser Ser Gly Asn Met Lys Val Leu Gln Glu Pro
257          20          25          30
260 Thr Cys Val Ser Asp Tyr Met Ser Ile Ser Thr Cys Glu Trp Lys Met
261          35          40          45
264 Asn Gly Pro Thr Asn Cys Ser Thr Glu Leu Arg Leu Leu Tyr Gln Leu
265          50          55          60
268 Val Phe Leu Leu Ser Glu Ala His Thr Cys Ile Pro Glu Asn Asn Gly
269 65          70          75          80

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RAW SEQUENCE LISTING

DATE: 05/18/2006

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Input Set : A:\pto.da.txt

Output Set: N:\CRF4\05182006\J578410.raw

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272 Gly Ala Gly Cys Val Cys His Leu Leu Met Asp Asp Val Val Ser Ala
273           85                      90                      95
276 Asp Asn Tyr Thr Leu Asp Leu Trp Ala Gly Gln Gln Leu Leu Trp Lys
277           100                      105                      110
280 Gly Ser Phe Lys Pro Ser Glu His Val Lys Pro Arg Ala Pro Gly Asn
281           115                      120                      125
284 Leu Thr Val His Thr Asn Val Ser Asp Thr Leu Leu Leu Thr Trp Ser
285           130                      135                      140
288 Asn Pro Tyr Pro Pro Asp Asn Tyr Leu Tyr Asn His Leu Thr Tyr Ala
289 145                      150                      155                      160
292 Val Asn Ile Trp Ser Glu Asn Asp Pro Ala Asp Phe Arg Ile Tyr Asn
293           165                      170                      175
296 Val Thr Tyr Leu Glu Pro Ser Leu Arg Ile Ala Ala Ser Thr Leu Lys
297           180                      185                      190
300 Ser Gly Ile Ser Tyr Arg Ala Arg Val Arg Ala Trp Ala Gln Cys Tyr
301           195                      200                      205
304 Asn Thr Thr Trp Ser Glu Trp Ser Pro Ser Thr Lys Trp His Asn Ser
305           210                      215                      220
308 Tyr Arg Glu Pro Phe Glu Gln His Leu Leu Leu Gly Val Ser Val Ser
309 225                      230                      235                      240
312 Cys Ile Val Ile Leu Ala Val Cys Leu Leu Cys Tyr Val Ser Ile Thr
313           245                      250                      255
316 Lys Ile Lys Lys Glu Trp Trp Asp Gln Ile Pro Asn Pro Ala Arg Ser
317           260                      265                      270
320 Arg Leu Val Ala Ile Ile Ile Gln Asp Ala Gln Gly Ser Gln Trp Glu
321           275                      280                      285
324 Lys Arg Ser Arg Gly Gln Glu Pro Ala Lys Cys Pro His Trp Lys Asn
325           290                      295                      300
328 Cys Leu Thr Lys Leu Leu Pro Cys Phe Leu Glu His Asn Met Lys Arg
329 305                      310                      315                      320
332 Asp Glu Asp Pro His Lys Ala Ala Lys Glu Met Pro Phe Gln Gly Ser
333           325                      330                      335
336 Gly Lys Ser Ala Trp Cys Pro Val Glu Ile Ser Lys Thr Val Leu Trp
337           340                      345                      350
340 Pro Glu Ser Ile Ser Val Val Arg Cys Val Glu Leu Phe Glu Ala Pro
341           355                      360                      365
344 Val Glu Cys Glu Glu Glu Glu Glu Val Glu Glu Glu Lys Gly Ser Phe
345           370                      375                      380
348 Cys Ala Ser Pro Glu Ser Ser Arg Asp Asp Phe Gln Glu Gly Arg Glu
349 385                      390                      395                      400
352 Gly Ile Val Ala Arg Leu Thr Glu Ser Leu Phe Leu Asp Leu Leu Gly
353           405                      410                      415
356 Glu Glu Asn Gly Gly Phe Cys Gln Gln Asp Met Gly Glu Ser Cys Leu
357           420                      425                      430
360 Leu Pro Pro Ser Gly Ser Thr Ser Ala His Met Pro Trp Asp Glu Phe
361           435                      440                      445
364 Pro Ser Ala Gly Pro Lys Glu Ala Pro Pro Trp Gly Lys Glu Gln Pro
365           450                      455                      460
368 Leu His Leu Glu Pro Ser Pro Pro Ala Ser Pro Thr Gln Ser Pro Asp

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RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/578,410

DATE: 05/18/2006
TIME: 15:14:51

Input Set : A:\pto.da.txt
Output Set: N:\CRF4\05182006\J578410.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:70; N Pos. 21,24

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29

Seq#:30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53

Seq#:54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/578,410

DATE: 05/18/2006

TIME: 15:14:51

Input Set : A:\pto.da.txt

Output Set: N:\CRF4\05182006\J578410.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:3401 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:0

Raw Sequence Listing before editing,
for reference only



IFW?

RAW SEQUENCE LISTING

DATE: 05/17/2006

PATENT APPLICATION: US/10/578,410

TIME: 10:39:12

Input Set : A:\3492-WO sequence listing as filed 11.4.04.txt

Output Set: N:\CRF4\05172006\J578410.raw

3 <110> APPLICANT: IMMUNEX CORPORATION
 4 Carter, Paul J.
 5 Zhou, Hongxing
 7 <120> TITLE OF INVENTION: ANTIBODIES THAT BIND INTERLEUKIN-4 RECEPTOR
 9 <130> FILE REFERENCE: 3492-WO
 C--> 11 <140> CURRENT APPLICATION NUMBER: US/10/578,410
 C--> 12 <141> CURRENT FILING DATE: 2006-05-05
 14 <150> PRIOR APPLICATION NUMBER: 60/518,166
 15 <151> PRIOR FILING DATE: 2003-11-07
 17 <160> NUMBER OF SEQ ID NOS: 77
 19 <170> SOFTWARE: PatentIn version 3.2

Does Not Comply
Corrected Diskette Needed

Cpg-2)

ERRORED SEQUENCES

3482 <210> SEQ ID NO: 77
 3483 <211> LENGTH: 327
 3484 <212> TYPE: PRT
 3485 <213> ORGANISM: Homo sapiens
 3487 <400> SEQUENCE: 77
 3489 Ala Ser Thr Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Cys Ser Arg
 3490 1 5 10 15
 3493 Ser Thr Ser Glu Ser Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr
 3494 20 25 30
 3497 Phe Pro Glu Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser
 3498 35 40 45
 3501 Gly Val His Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser
 3502 50 55 60
 3505 Leu Ser Ser Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Lys Thr
 3506 65 70 75 80
 3509 Tyr Thr Cys Asn Val Asp His Lys Pro Ser Asn Thr Lys Val Asp Lys
 3510 85 90 95
 3513 Arg Val Glu Ser Lys Tyr Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro
 3514 100 105 110
 3517 Glu Phe Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys
 3518 115 120 125
 3521 Asp Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val
 3522 130 135 140
 3525 Asp Val Ser Gln Glu Asp Pro Glu Val Gln Phe Asn Trp Tyr Val Asp
 3526 145 150 155 160
 3529 Gly Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe
 3530 165 170 175
 3533 Asn Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp

RAW SEQUENCE LISTING

DATE: 05/17/2006

PATENT APPLICATION: US/10/578,410

TIME: 10:39:13

Input Set : A:\3492-WO sequence listing as filed 11.4.04.txt

Output Set: N:\CRF4\05172006\J578410.raw

3534				180				185				190			
3537	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Gly
3538				195				200				205			
3541	Pro	Ser	Ser	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro
3542				210				215				220			
3545	Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Gln	Glu	Glu	Met	Thr
3546	225						230				235				240
3549	Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser
3550					245					250				255	
3553	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr
3554				260					265				270		
3557	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr
3558				275					280				285		
3561	Arg	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Glu	Gly	Asn	Val	Phe
3562				290				295				300			
3565	Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys
3566	305						310				315				320
3569	Leu	Ser	Leu	Ser	Leu	Gly	Lys								
3570							325								

E--> 3573 59

E--> 3575 Express Mail No. EV438677738US

deleted

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/578,410

DATE: 05/17/2006
TIME: 10:39:14

Input Set : A:\3492-WO sequence listing as filed 11.4.04.txt
Output Set: N:\CRF4\05172006\J578410.raw

Invalid <213> Response:

Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29

Seq#:30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53

Seq#:54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76

VERIFICATION SUMMARY

DATE: 05/17/2006

PATENT APPLICATION: US/10/578,410

TIME: 10:39:14

Input Set : A:\3492-WO sequence listing as filed 11.4.04.txt

Output Set: N:\CRF4\05172006\J578410.raw

L:11 M:270 C: Current Application Number differs, Replaced Current Application Number
L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:3401 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:70 after pos.:0
L:3573 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:77
L:3575 M:333 E: Wrong sequence grouping, Amino acids not in groups!
L:3575 M:330 E: (2) Invalid Amino Acid Designator, NUMBER OF INVALID KEYS:4
L:3575 M:252 E: No. of Seq. differs, <211> LENGTH:Input:327 Found:331 SEQ:77